

There is now a steady immigration of about 20,000 Russians a year to Siberia.

The Canadian public debt was increased the last fiscal year \$4,592,000 net, the total net debt being \$246,000,000.

The University of Michigan leads with 4,000 undergraduates. Then comes Harvard, Pennsylvania and Yale in that order.

There is no discovery of modern science that is not available in Japan, maintains the New York Recorder. There is no modern scholarship that is not appreciated by its wise men.

English conservatism is at last yielding to the point that the Great Western has decided to warm its trains on the American plan and abandon the present archaic plan of foot-warmers. Another radical departure which is heralded in large type in English papers is that the Great Western has decided to experiment in the brand new departure of lightning the cars.

A curious illustration of the growth of real estate values in New York City was afforded a few days ago by the registry of a deed of conveyance executed in July, 1817. This deed, relates the Trenton, N. J., American, comprised the site of six full city blocks, sold for \$506.25. The present worth of that land is now about \$500,000. It lies on the banks of the Harlem river, in the old Ninth ward.

"It is a remarkable fact," observes the Chicago Record, "that to light the United States treasury building in Washington costs the government a little more than \$1,000 a month, though the hours of business are from 9 in the morning till 4 in the afternoon, with no night work. There could be no better commentary on the methods of building employed by the government in construction of its great department houses in the national capitol."

Miss Ellen Coe, librarian of the New York Free Circulating Library, replying to the question, What can be done to help a boy to like good books after he has fallen into the habit of reading dime novels? says that the boy must not be deprived of his mental stimulant all at once, but gradually by the substitution of better but not too mild books. 'Custer's Life,' she suggests, is a good book to start for those who have a taste for sanguinary adventure.

"Every man his own diamond factory" might be the title, suggests the San Francisco Chronicle, of a semi-scientific romance, based on a New York story which asserts that a man in Indiana so much charcoal that when he died a small diamond was found to have formed and become encased in his liver. The theory is that certain chemical constituents of the body gave the carbon its highest development, but there is one thing in the way of the theory, and that is the theory of the story as told.

The Indian woman can be civilized even if the Indian man cannot. Here is the case of Louisa Crouse, an Indian girl, twenty years old, a direct descendant of the Algonquins. She is at the famous normal school in Oswego, N. Y., and is determined to obtain a good education. She is penniless, her mother is dead, her father is a dipsomaniac and there are no wealthy relatives or friends to aid her in her ambition; nevertheless she has managed to pay her way so far and clothe herself as well by the hardest labor of all kinds at all times. She is completing her course but works as hard as ever in order to put by something with which to educate her younger sister. After completing her studies at the normal school she hopes to enter some medicine college and be graduated as a physician.

The San Francisco Examiner remarks that a humorous story is by universal consent deemed common property, and everybody who uses it, whether in print or by word of mouth, is at liberty to localize and modernize it if by so doing he can add to its humor and interest. There are three books, "Aristophanes" in Greek, "Le Moyen de Parvenir" in French, and "Joe Miller's Jest" in English, which contain ninety-nine per cent, of the humorous and witty stories current now. But is that any reason why one should not tell of print a good story? Copyright laws have their limitations, and one of them is that whatever makes people laugh is the common property of the world, and may be used, adapted, modified or travestied by anybody who has sense enough of humor to appreciate and communicate a good thing.

LOVE'S HERITAGE.

Dread o'er me, blue as summer skies,
The azure splendor of thine eyes,
And smile with lips whose murmurs tell
Like lingering sound of far-off bells
O'er shining seas, that thou for me
Art skies and sound and summer sea!

Skies that contain the sun, the moon,
The stars, the birds, the winds of June;
And tones that, swelling far and near,
Dear more than music to mine ear:
And sea, above whose changeless hue
The sun is bright, the sky is blue!

Art thou mine star? Sweet love thou'lt more
Than all that ever twilight bore.
Art thou my song? Dear love, from thee
The whole world takes its melody.
Art thou—nay! what can words impart
To tell one dream of what thou art?

Thou art my all: I know that love
Rains from the deepening dome above
In silver dewdrops, that the earth
Receives with hushed and solemn mirth;
So thou—all seasons linked in one—
Art flower, and bird, and breeze, and sun!

—William M. Briggs.

A MISSING BUTTON.

A CHEERFUL south room, with a bay window full of blossoming plants; a bright fire glowing behind a burnished grate, and a little gilded clock, which had just struck nine at night—all these things met Mrs. Chickery's eye as she laid down her book and yawned. She was a plump and fair-faced young matron of some four or five and twenty, with bright auburn hair, soft blue eyes and a complexion whose roses stood in need of no artificial rouge.

"Fanny," said Mr. Chickery, looking up from his newspaper, "did you call on those Carters to-day?"
"No; I never thought of it."
"And they leave town to-morrow morning; and Carter is absurdly sensitive to all slights, fancied or real. Fanny, I desired you to make a point of calling."

"Well, I did intend to, Frank," pouted Mrs. Chickery, "but one can't think of everything."
"You cannot, it seems."

"It appears to me that you are making a mountain out of a molehill," said Fanny, rather tartly.
"It may affect my business very seriously. Carter's house carries great influence with it."

Mrs. Chickery was silent, patting the velvet carpet with her foot in a manner that indicated some annoyance.

"I shall have to leave here very early to-morrow morning," said her husband, presently.
"To go to Scenersville, about Aunt Elizabeth's will?"

"Yes."
"Oh, I wouldn't, Frank!"
"Why not?"

"It's such a bitter cold weather to travel in, and Aunt Elizabeth is such a whimsical old woman, it's as likely as not that she'll change her mind about making a will when you get there. I would wait a little, if I were you."

Mr. Chickery smiled.
"That would be your system of doing things, Fanny, but not mine."
"My system, Frank! What do you mean?"

"I mean that you believe in putting things off indefinitely, and not always in the wisest manner. I wish you'd break yourself of that habit, Fanny. Believe me, it will some day bring you to grief."

Mrs. Chickery contracted her pretty eyebrows.
"I don't believe in being lectured, Frank."

"And I don't very often lecture you, my dear; pray give me credit for that."

"You didn't think you were marrying an angel when you took me, I hope?"

"No, my love. I thought I was marrying a very pretty little girl, whose few faults might easily be corrected."

"Faults! Have I any great faults, Frank?"

"Little faults may sometimes entail great consequences, Fanny."

"If you could any more I shall go out of the room."

"You need not, for I am going myself to pack my valise. By the way, there's a button off the shirt I want to wear to-morrow. I wish you would come up stairs and sew it on for me."

"I will, presently."

"Why can't you come now?"

"I just want to finish this book; there's only one more chapter."

And Fanny opened her volume so resolutely that her husband thought it best not to contest the question.

Sitting all alone in front of the bright fire, Mrs. Chickery gradually grew drowsy, and before she knew it she had drifted off into the shadowy regions of dreamland.

"Oh, Frank, I forgot all about speaking to her last night," she cried, with conscience-stricken face. "But I'll run right up—she can have the breakfast ready in a very few minutes."

She sprang out of bed, thrust her feet into a pair of silk-lined slippers, and threw a shawl over her shoulders.

Mr. Chickery bit his lip and checked her.

"No need, Fanny," he said, a little bitterly; "I must leave the house in fifteen minutes or miss the only through train. It's of no use speaking to the cook now."

"I am so sorry, Frank."

Mr. Chickery did not answer; he was apparently absorbed in turning over the various articles in his bureau drawer, while Fanny sat shivering on the edge of the bed, cogitating how hard it was for her husband to start on a long journey that bitter morning without any breakfast.

"I can make a cup of coffee myself over the furnace fire," she exclaimed, springing to her feet. But Mr. Chickery again interposed.

"Sit down, Fanny, please. I would rather you would sew this button on the neck of my shirt. I have packed the others—those that are fit to wear. I have shirts enough, but not one in repair."

Fanny crimsoned as she remembered how often, in the course of the last month or two, she had solemnly promised herself to devote a day to the much-needed renovation of the husband's shirts.

She looked round for her thimble. "I left it down stairs last night. I'll get it in a minute."

The housemaid had just kindled a fire in the sitting-room grate; it was blazing and crackling cheerfully among the fresh coals, and Fanny could not resist the temptation of pausing a moment to warm her chilled fingers and watch the greenish-purple spires of flame shoot merrily up the chimney, until she heard her husband's voice calling her imperatively:

"Fanny, Fanny, what are you doing?"

"Oh, dear," thought the wife, as she ran up the stairs, "I wish Frank wouldn't be so cross. He's always in a hurry."

Little Mrs. Chickery never stopped to think that the real reason was that she, his wife, was never "in a hurry."

The needle threaded, the thimble fitted on, an appropriate button was next to be selected.

"Oh, dear, Frank, I haven't one the right size!"

"Sew on what you have then, but be quick!"

But Fanny was quite certain there was "just the right button" somewhere in her work-basket, and stopped to search for it.

"There, I told you so!" she cried, triumphantly holding up on the point of her needle.

"Well, well, sew it on quick," said Mr. Chickery, glancing at his watch nervously.

"That's just your worrying way, Frank, as if anybody could sew a button on well in a hurry. There! My needle has come unthreaded."

"Oh, Fanny, Fanny," sighed her husband, fairly out of patience at last, "why didn't you do it last night, as I begged of you? I shall miss the train and what little chance we had of a place in Aunt Elizabeth's will will be sacrificed to your miserable habit of being always behindhand."

Fanny gave him the shirt and began to whimper a little, but Mr. Chickery had neither the time nor the inclination to pause to soothe her petulant manifestations of grief. He finished his dressing, caught up his valise, and ran down the stairs two steps at a time into the street.

"There he goes," murmured Fanny, "and he's gone away cross with me, and all for nothing but a miserable button! I wish there wasn't such a thing as a button in the world!" (A wish which, we much misdo, many another wife than Mrs. Fanny Chickery has echoed, with perhaps better reason.)

Mrs. Chickery was sitting down to her little dinner à la solitaire, with a daintily browned chicken, a tumbler of currant jelly, and a curly bunch of celery ranged before her, when, to her surprise, the door opened and in walked her lord and husband.

"Why, Frank, where on earth did you come from?" cried the astonished wife.

"From the office," coolly answered Mr. Chickery.

"But I thought you were off for Scenersville in such a hurry."

"I found myself just five minutes too late for the train, after having run all the way to the depot."

"Oh, that was too bad."

Chickery smiled a little as he began to carve the chicken.

"Yes, I was a little annoyed at first; it did seem rather provoking to be kept at home by only a button."

"What are you going to do?"

"Why, I shall make a second start to-morrow."

"I'll see to it that your breakfast is ready this time, to the second, and all your wardrobe in trim," said Fanny, rather relieved at the prospect of a chance of retrieving her character.

"You need not, I have engaged a room at a hotel near the depot. I can't run any more risks."

He did not speak unkindly, and yet Fanny felt that he was deeply displeased with her.

dinner with what appetite was left to her.

Three days afterward Mr. Chickery once more made his entrance, just at dusk, carpet-bag in hand, as Fanny sat enjoying the ruddy shine of the coal-fire and the consciousness of having performed her duty in the mending and general renovation of her husband's drawerful of shirts—a job which she had long been dreading and postponing.

"Well, how is Aunt Elizabeth?" questioned Fanny, when her husband, duly welcomed and greeted, had seated himself in the opposite easy-chair.

"Dead! Oh, Frank! Of her old enemy, apoplexy?"

"Yes."

"Was her will made?"

"It was. Apparently she had expected me, on the day she herself appointed; and on my non-arrival in the only train that stops, she sent for the village lawyer, made her will, and left all her property to the orphan asylum in Scenersville, with a few bitter words to the effect that the neglect of her only living nephew had induced her, on the spur of the moment, to alter her original intention of leaving it to him. She died the very next morning."

"Oh, Frank, how much was it?"

"Ten thousand dollars. You see, Fanny, how much that missing button has cost me!"

Fanny Chickery sat like one condemned, by the utterance of her husband's words. Not alone the one missing button, but the scores—nay, hundreds—of trifling omissions, forgetfulnesses, and postponements which made her life one endless endeavor to "catch up" with the transpiring present, seemed to present themselves before her mind's eye. What would this end in? Was not the present lesson sufficiently momentous to teach her to train herself in a different school?

She rose, and came to her husband's side, laying one tremulous hand on his shoulder.

"There shall be no more missing buttons, my love," she said earnestly. —New York News.

Perpetual Motion.

The idea that perpetual motion may be realized, or that a machine may be made to run itself until worn out, is one of the most fascinating and persistent fallacies that has ever gained a hold upon the human mind. Most of the machines of this kind have existed only in the imagination of the inventors, but some of the motors have been actually built, and a few of them have been shown in operation. An interesting example, recalled the other day by President Henry Morton, of the Stevens Institute of Technology, is furnished by the once famous Reader perpetual motion machine. Large sums of money were sunk in this, as in more recent schemes like the "Keely motor," and for the purpose of exposing the fraud involved, a small motor was constructed about eighty years ago by Isaiah Luken, at the suggestion of Nathan Sellers. This is preserved in the collection of the Franklin Institute at Philadelphia. The model consists of a horizontal circular table on a pivoted vertical shaft, with two inclined planes mounted on wheels on the table and a car containing two removable weights on each inclined plane. Levers attached to the inclined planes and the central shaft tend to transmit to the central shaft the tendencies of the inclined planes to run from under the cars and of the cars to run down the inclined planes, and these tendencies are supposed to rotate the central shaft. The arrangement is admirably simple in more senses than one, but, wonderful to relate, it seems to work. The machine stops when the weights are removed from the car, but starts when they are replaced, and under favorable circumstances may run indefinitely. This startling phenomenon tends to shake the novice's faith in the conservation of energy. Close investigation, however, reveals the fact that the base of the machine hides a train of clockwork, whose springs can be wound through one of the ornamental knobs of the model's glass case. This clockwork drives the plate on which the central vertical shaft is pivoted, and the frictions are so adjusted that when the cars are loaded the turning plate will drive the shaft, but without the weights in the cars the friction is insufficient. —Trenton (N. J.) American.

How a Fish Comes to the Surface.

A curious physiological discovery has been made in the past year by Professor Bohr, of Copenhagen, in regard to the mode of storage by which a fish accumulates so much oxygen in the air that distends the swimming or air bladder.

The air contained therein has a percentage of oxygen that may rise to as much as eighty-five, an amount much in excess of the percentage in atmospheric air. Professor Bohr tapped the air bladders of codfish and drew off the gas by means of a trocar and airtight syringe. The gas had fifty-two per cent of oxygen. In a few hours the air bladder was refilled, apparently by a process of secretion of gas from the blood in the capillaries on the wall of the bladder. In one experiment the gas thus secreted had eighty per cent of oxygen. When the nerves connected with the organ were severed, the secretion ceased and the organ was not refilled.

It thus appears that when a fish descends to a great depth, and his body is reduced in size by increased pressure of the water about him, he is able to attain his former size and rise by secreting the gas he needs, and not by absorbing it from the water. Support is thus given to the theory that the gaseous exchanges that occur in the lungs of animals are not purely physical. —Baltimore Sun.

FOR FARM AND GARDEN.

THE VALUE OF WOOD ASHES.

Woodashes are particularly valuable as a fertilizer. Even if most of the potash has been removed by leaching they should never be wasted. As they do not wash readily from the soil they are more lasting than many other fertilizers. Their application to peach trees is strongly recommended, not as a cure but as a preventive of yellows. —New York World.

SMALL POTATOES FOR SEED.

The small potatoes are as good for seed as the large ones, and much more economical, as three bushels of them will plant an acre of land and twenty bushels will be needed for the same of large ones. The perfect ripeness of the seed is the main point, and each seed should be cut as if they were large. In grafting one takes no thought of the size of the bud nor in the rooting of cuttings, and a seed potato is essentially a cutting. And as the small potatoes are unusable it is an economy to make this use of them. The majority of experiments in growing potatoes have shown no important difference in yield of small or large seed. —New York Times.

FEEDING STRAW FOR BULK.

No animal can live wholly on food that has too concentrated nutrition. When meal is given some coarser feed must be cut up and mixed with it to make the ration bulky enough for the gastric juice to properly act upon it. What this coarser material shall be does not much matter, provided it is something that is itself digestible. Cut hay mixed with corn meal is commonly given for horses, but for cows cut straw or corn stalks is generally substituted for the hay. Straw has less nutrition than hay, and what it has is mainly carbonaceous. But it is for that fact the better fitted to mix with linseed and cotton-seed meal, that have a large excess of the nitrogenous elements of nutrition. The hay crop in many places is deficient this year, but whenever much grain is grown cut straw may well take its place, if given an addition of enough concentrated food to supplement its deficiencies. —Boston Cultivator.

STEER FEEDING EXPERIMENT.

Bulletin No. 35 of the Utah Experiment Station treats of, first, the value of straw as a substitute for hay; second, short spring periods of grain feeding; third, relative value of ensilage, roots, and straw as condiments; fourth, value of different grain rations. The following facts are brought out in the bulletin:

1. Steers fed on mixed hay alone for 112 days gained 1.09 pounds per day each.
2. Steers fed straw and hay with grain gained 78 pounds per day each for thirty-three days. Steers fed on lucerne and straw for fifty-six days gained practically nothing. Steers fed on red clover and straw for twenty-three days gained 56 pounds per day each.
3. Steers fed on grain and straw for 112 days gained 33 pounds per day per steer.
4. All the steers, after having been fed as specified in paragraphs 1, 4 and 3, gained but 34 pounds per day each for thirty-five days on mixed hay, grain and roots. The smallness of the gain is thought to be due to the change of food.
5. Steers housed at night and in a yard during the day, when fed on hay and grain, and either roots, straw or ensilage, gained 1.35 pounds per day each for eighty-four days.
6. The experiments indicate that any attempt to crowd a steer late in the spring, after he has been moderately well fed, will result in a loss.
7. Roots made more gain than either straw or ensilage.
8. As the amount of grain fed increased the growth increased, and the cost of the gain decreased.
9. Steers bought at two cents and fed in the manner indicated during the winter, cannot be sold at a profit in the spring for less than three cents.

FARM AND GARDEN NOTES.

It is about time to settle upon the breeders in your flocks. A cracked hoof will spoil a good horse quicker than anything else. A dozen of eggs is now worth about as much as the hen that lays them. You will soon pay for a bone cutter in the increase of eggs your hens will shell out. Breeders should never lose sight of the fact that good horses always have good dams. By continuously mating the "flower of the flock" you advance step by step towards perfection. Do not fail to give the fowls something green, silage, cabbage, cut clover, turnip tops or rye. Select your best hens for breeders. Take those that are thrifty, well formed and the best layers if eggs are wanted and mate to a thoroughbred rooster of some good laying breed. Suppose you rake out your poultry house clean, and put in a new supply of shavings, chaff cut straw or something nice and dry for the hens to scratch among. If there comes a few hours of warm sunshine open all the doors and let the sun and air get in, shutting the house up again before sundown.

HORSE BOTS.

I seldom go to see a sick horse in the country, writes S. R. Howard, V. S., but that some one does not ask me this question: "Doctor, do you think he has the bots?" A great many people think the bot are injurious. Bots do not in the least cause any pain or suffering to the horse. The female bot fly deposits her eggs upon the hair of the horse about the breast and forelegs. In several days these eggs become ripe: then the slightest warmth and moisture brings forth the latent larvae. You can even

hatch them in your hand by blowing your breath upon them. A small worm thus makes its appearance. You can readily see how easily then the bot gains access to the stomach. The horse licks himself, the bot thus being hatched, and on the tongue or lips of the horse, you see, it is easy then for the bot to pass to the stomach with food or drink, where he attaches himself to the insensible walls of the stomach and lives there, by absorption, a year. He is then grown; he lets go his hold, passes out, bursts open and emerges as the bot fly. In short, this is his round of existence. His life in the horse is merely passive, and does no harm unless he should become so numerous that he might obstruct the passage of food. This last is very, very rare.

No matter what disease a horse dies of, the stomach often partially digests quickly and then raptures. Now, some men in opening such cases and finding the stomach ruptured and bots in the abdominal cavity, look no further for the cause of death, but jump at the conclusion, "Bots have eaten through the stomach."

There are few horses that do not have bots in considerable numbers. I have seen almost a quart of them in a large horse's stomach, and he had never shown any ill effects from them.—The Cultivator.

CHARACTER IN COWS.

Beware of fat cows. This alarm is sounded strictly for the benefit of good progressive dairy-men. Any one can succeed in keeping cows poor in flesh simply by starving them, while only a generous feeder can make them too fat. While generous feeding is a necessity with good and profitable dairymen, yet the condition precedent for profit is that the cow should apply her excess of feed to milk and not to fat making. The first thing, of course, in getting up a good herd is to have large milkers, and they should be persistent, long milkers and also rich milkers, but such cows will not be profitable milkers if they get too fat. Such cows waste lots of their food in making fat, and should be turned over where they belong. As a rule fat cows will not give rich milk, because the fat of the food goes to the body instead of the pail. The proof of this, however, must not be taken from the looks of things alone, but some kind of test like the Babcock must be used. For instance, there is no more common delusion than to suppose that cows giving very yellow milk are extra good butter-makers. There is no more common delusion than to think that yellow color goes with richness in milk. Now, the fact is, that yellow milk contains no more, if as much butter fat as white milk. Appearances are often deceptive in this line. Cows with yellow skins are no better for butter-making than those with white skins, common belief to the contrary, notwithstanding. I was once principal performer in some interesting experiments in this line. We classified the Jerseys in a herd, picking out the yellow-skinned and yellow milkers, and pitted them against the white-skinned and white milkers. The whites made more cream. Yellow skins and yellow milk generally go together. Guernseys have more yellow skins than Jerseys, but do not give more cream or make so much butter. Richness is a race of individual character. —Home and Farm.